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## FEDERAL-STATE COOPERATIVE

### SNOW SURVEYS AND IRRIGATION WATER FORECASTS

for

## Oregon

Ву

Division of Irrigation, Soil Conservation Service United States Department of Agriculture and Oregon Agricultural Experiment Station



Data included in this report were obtained by the agencies named above in cooperation with the Oregon State Engineer, U. S. Forest Service, National Park Service and other Federal, State and local organizations.

MAY 1, 1950

As of



#### FEDERAL-STATE COOFFRATIVE

#### SNOW SURVEYS AND IRRIGATION WATER FORECASTS

FOR

OREGON

Report Prepared

by

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and

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#### MAY 1, 1950

#### REVISED WATER SUPPLY OUTLOOK

Oregon's 1950 water supply prospects remain "good" throughout the state although April precipitation has been only 70 percent of normal. If normal snow-melt and precipitation conditions prevail, there should be no late season deficiencies of water anywhere in the state. New runoff records will be established in the upper Deschutes watershed with extremely high streamflows to be expected on the White, Hood, Sandy, Clack-amas, Santiam, McKenzie Rivers and the Middle Fork of the Willamette.

Snow survey records show mountain snow cover now averages a greater water content than has ever been measured at this date. Present snow contains about 60 percent more water than average, 40 percent more than in 1948 and about 25 percent more than last year. Snow on the northern Cascades, especially on the western slopes, contains about 90 percent more water than in 1948. Still Creek snow course, located on Mt. Hood near Government Camp at an elevation of 3700 feet, has a measured water content of 40.2 inches compared with 21.5 inches in 1948 and a 10-year average of 13.0 inches. At 5700 feet on Mt. Hood at the Phlox Point course the snow contains 100.1 inches of water compared with 72.5 inches in 1948, 89.1 inches in 1949, and an 11-year average of 56.4 inches.

State-wide precipitation during April was only about 70 percent normal varying from 33 percent in southeastern Oregon to 87 percent in the Wallowa Mountain area.

Total water stored in the larger Oregon reservoirs is now 1 percent greater than at this date last year, 14 percent greater than in 1948, 4 percent greater than in 1947 and 3 percent less than the 10-year average.

Small revisions in streamflow forecasts have been made in accordance with the subnormal rainfall in April. However, much of the April precipitation has come in the form of snow, due to the coolness of the weather, and has yet to run off. Hence, some forecasts have been revised upwards. Very heavy seasonal flows will occur in the Deschutes, Hood River and Willamette Basins with new records of flow to be expected in scattered tributaries. Extremely high peak flows can be expected in some of these areas.

Although forecasts of streamflow have been reduced in some areas, this will not mean water shortages unless conditions of snow-melt and precipitation should be adverse.

See pages 2 and 3 for streamflow forecasts.



#### REVISED STREAMFLOW FORECASTS, MAY 1, 1950

The following summarized runoff forecasts are based on mountain snow cover and on the assumption that precipitation and temperature during the runoff season will be approximately normal. Appreciable deviations from normal of temperature and/or precipitation, especially during April, May or June, will correspondingly modify these forecasts.

BASIN AND STREAM					us. A. F.
	Forecas		asured Rur		10-yr avg.
	1950	1949	1948	1947	1939-48
Columbia R. at The Dalles 11	.6000•0 <sup>d</sup>		127590.0		88246.5
Columbia it at the partor in	.0000	92854.0		98488.0	0021040
NORTHCENTRAL OREGON		0200140		001000	
Hood River, W.Fk. near Dee	225.0	225.1	158.1	111.1	130.0
White R. below Tygh Valley	265.0	265.6	177.0	103.1	124.5
Hood R. at Powerdale plus					
Power Canal	480.0	483.2	338.9	242.5	261 •7
TIME A DITTE A LIBERT T A REPORT T A					
Walla Walla R.So.Fk.nr.Milton	70.0	•	102.1	62 • 7	66.2
Umatilla R. near Gibbon	95.0	a a	148.7		83.3
Umatilla R. at Pendleton	185.0	a	311.3		161.9
McKay Creabove McKay Reservoir	29.0	a.	63.4	16.1	28.6
Monay of Cabo vo Monay Nosel voll	23.00		00.44	10.01	20 00
NORTHEASTERN OREGON					
Grande Ronde Ronr LaGrande	225.0	a	366 •2	118.8	173.9
Catherine Creck near Union	85.0	a	109.9	60.9	68 •8
Bear Creek near Wallowa	90.0	a	97 •4	69.6	68 •6
Lostine R. near Lostine	155.0	a	153.5	127.7	118.9
Hurricane Cr.near Joseph	55.0	a	59 •4	49.9	43.6
Wallowa R. E.Fk. plus Power Pl.	15.0	a	15.7	10.4	11.0
Imnaha River at Imnaha	430.0	a	451 •2	228.1	286.5
Powder River at Salisbury	75.0	a	78.6	43.6	58.6
Burnt R.nr. Hereford (Natural Flow)	45.0	а	62 • 7	20.2	37.6
PARTED A OPERON					
EASTERN OREGON Malheur R.Mid.Fk.nr. Drewsey	68 •0		74.0	34.0	71 •4
Malheur R.N. Fk. at Beulah	56.0	a a	64.4		57.3
Owyhee Reabove Owyhee Rese	335.0	a	237.3		376.1
John Day R. at Prairie City,	555 60	a	201 •0	170.0	210.1
combined with Power Canal	70.0	a	91.4	38.6	50.3
John Day R.Mid. Fk. at Ritter		a	223.7	93.1	117.0
John Day R. No. Fk. near Dale		a	425.0	216.5	236.7
Strawberry Cr. nr. Prairie City		a	11.0	7.9	8.1
HARNEY BASIN					
Silvies R. near Burns	70.0	a	133.1	47.7	90•2
Donner und Blitzen nr Frenchgle		а	81.4	38.9	63.1
Trout Creek near Denie	7.0	а	8.4	3.8	8•4

<sup>\* -</sup> Discharge data from preliminary records of U. S. Geological Survey and Oregon State Engineer

a - Discharge data not available

d - Forecast by Boise office



Streamflow Forecasts, May, 1950 (Cont'd.)

Streamflow Forecasts, May, 1950 (Cor					
	AprSept.				
BASIN AND STREAM	Forecast		red Runoi		yr •Avg •
	1950	1949	1948	1947	1939-48
CENTRAL OREGON					
Ochoco Reservoir Net Inflow	30.0	a	72.3	8.2	24.7
Crooked River near Post	170.0	a	206.9	40.6	113.9°
Crescent Lake Net Inflow	30.0	29.4	27.4		14.6
Little Deschutes R. near Lapine	120.0	122.1	105.1	64.9	67.9
Odell Creek near Crescent	40.0	34.9	34.7	28.8	25.3
Deschutes R. below Snow Creek	85 •0	76.2	<b>7</b> 8 •2	64.5	49.5
Crane Prairie Roservoir Inflow	165.0	151.6	141.9	123.4	96.35
Deschutes R. at Pringle Falls	325.0	280.3	258.2	284.8	250.2 <sup>1</sup> 437.1 <sup>1</sup>
Deschutes R. at Benham Falls	585.0	550.1	507 •2	495.1	437.1
Tumalo Creek and C.S. Canal	5 <b>7.</b> 0	а	<b>53.2</b>	49.1	43.4
Squaw Cr. near Sisters	60.0	а	56 <b>•5</b>	45.7	43.9
SOUTHCENTRAL OREGON			1	,	
Chowaucan Roncar Paisloy	65.0 <sup>b</sup> 60.0 <sup>b</sup>	a	74.5 <sup>b</sup> 70.8	32.9 <sup>b</sup> 29.1	60•2 <sup>b</sup> 55•6 <sup>b</sup>
Deep Crock Above Adol	60•0 <sup>b</sup>	а	70.8°	29.1	55'•6 <sup>b</sup>
KLAMATH BASIN					
Spraguo R. near Chiloquin	215.0	184.0	239.9	105.5	211.3
Williamson R.bolow Sprague R.	345.0	320.6	356.3	223.8	350.0
Upper Klamath Lake Net Inflow	416.0	391.2	463.6	342.0	465.5
Clear Lake Reservoir Not Inflow	31.5	34.7	70.2	15.9	36 <b>•7</b>
Gerber Reservoir Net Inflow	20.0	20•2	21.9	4.3	15.9
SOUTHERN OREGON					
Applegate R. near Ruch	125.0	a	166.3	64.6	105.6
Hyatt Reservoir Net Inflow	6.0	7.6	9.1	2.1	5.1
Fourmile Lake Net Inflow	8 •0	8.5	11.0	6.0	7.2
Little Butte Cr.N.Fk. below					
Fish Lake (Natural Flow)	16.5	a	16.2		13.0
Rogue R.N.Fk. above Prospect	<b>375.</b> 0	375.5	343.7		276.4
Rogue R.Mid.Fk. plus Power Canal	84.0	а	83.1	63.4	68 • 4
Rogue R.So. Fk. above Imnaha Crock		80.3	69.7	41.4	
Rogue R. below South Fork	<b>77</b> 5 •0	а	732.5	539.9	601.8
Clearwater Rivor above Trap Creek	65.0	71.8	67.4	61.4	58.5
No •Umpqua R• below Lake Creek	165.0	183.0	174.3	157.0	149.8
WILLAMETTE VALLEY					
Willamotto R.Mid.Fk. at Eula	1200.0	1019.2	1025.9	737.1	717.6
McKenzie R. at McKonzio Bridge	710.0	716.4	580.0	501.2	496.4
McKonzio River near Vida	1600.0	1516.7	1419.5	1084.2	1065 •8
Clackamas R. at Big Bottom	250.0	231.1	177.5	136.2	138.0

<sup>\* -</sup> Discharge data from preliminary records of U. S. Geological Survey and Orogon State Engineer

a - Discharge data not available

b - April-June rather than April-Sept.

d - Forocast by Boise office

o - Excl. 1939

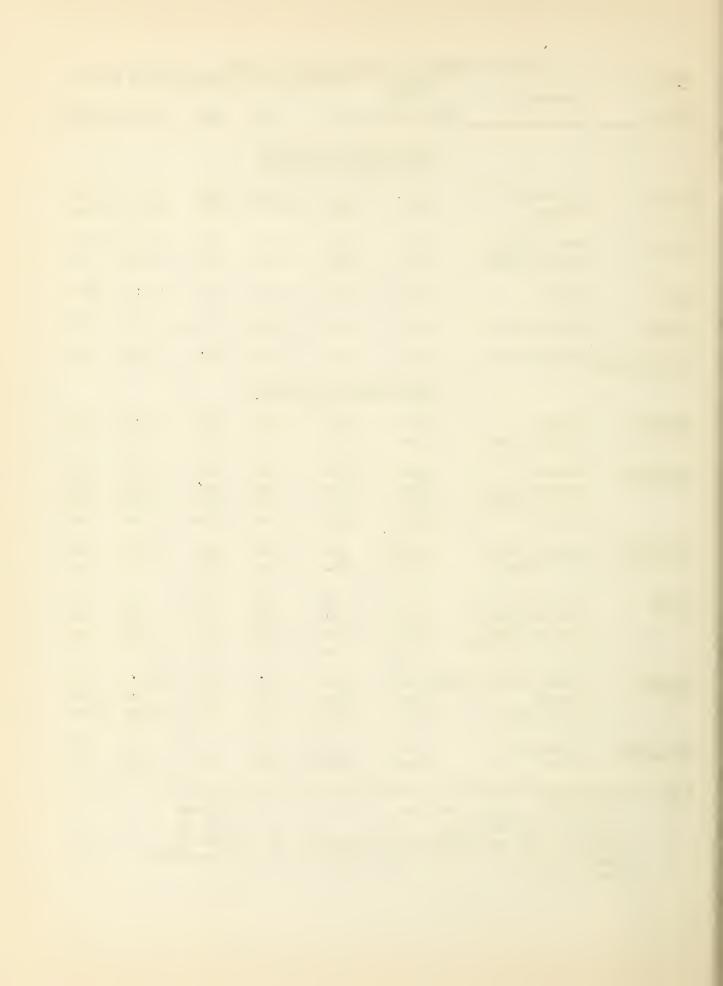
f - Excl. 1948





SOIL CONSERVATION SERVICE

	STATUS OF	RESERVOIR STO					
BASIN	PROPERTY	USABLE	THOUS.	A.F. I	N STORAGE	ABOUT	MAY 1
and STREAM	RESERVOIR	CAPACITY (Thous • A • F • )	1950	1949	1948	1947	1939-48
			-				
		UPPER COL					
		LOWER SN.	ARE IN O	VEGON			,
Owyhee	Antelope	36.5	$N \cdot R \cdot$	N.R.	$N \bullet R \bullet$	22.0	29•8 <sup>d</sup>
	Owyhee	715.0	643.5	592 • 7	481.8	626.9	6 <b>6</b> 9 • 7
Malheur	Warm Springs	191.0	80•0	98 • 3	70.2	143.5	161.4
	Agency Valley	60.0	47.0	57.1	52.2	56 •8	57.9
Domest	That day	25.0	21 0	07 5	30.4	24 6	23.0
Burnt	Unity	25 •2	21.0	23.5	19.4	24.6	23.0
Powder	Thief Valley	17.4	17.4	12.8	17.4	17.6	17.6°
Grande Ronde	Wallowa Lake	40.9	12.3	21 •2	19.3	25.9	26.6
		LOWER COL	UMBTA DR	AINAGE			
Umatilla	McKay	74.0	67.7	65.5	71.9	73.1	67.3
	Cold Springs	50•0	49.9	48.0	49.7	50.0	48 • 6
Deschutes	Ochoco	46.0	34.0	38.6	41.5	36.4	32.6
	Crescent Lake	80.0	51.8	53.4	49.9	53.8	40.8
	Crane Prairie	50.0	50.8	43.1	32.7	43.2	38 • 5 <sub>F</sub>
	Wickiup	180.0	175.0	183.9	141.8	95.6	70.5°
Willamette	Cottage Grove	30.1 <sup>b</sup>	28.7	26.7	29.6	29.9	28 •0 <sup>f</sup>
WIII TONIO CCO	Fern Ridge	94.2b	86.0	73.4	93.3	87.8	78•5 <sup>g</sup>
	J						
Rogue	Fish Lake	7.7	5.2	6.1	4.0	5.0	
	Fourmile Lake <sup>a</sup>	16.0		. 8.6	2.4	6.6	8.6
	Emigrant Gap	8 • 2	8.2	8.2	8 •2	8.1	8.1
	Hyatt Prairie	16.0	8 •1	12.6	5.8	4.8	9.1
Klamath	Upper Klamath	Lake $584 \cdot 0^{\mathbf{c}}$	531.4	513.6	482.9	431.7	480.7
<del></del>	Gerber	94.0	51.4	47.7	40.9	42.6	60•8
	Clear Lake	440.2	164.0	184 • 4	176.6	220.5	277.6
Goose Lake	Cottonwood	4.1	4.1	3.5	3 • 4	4.0	3.8 <sup>h</sup>
OAMI DEODD	Drew	62.5	62.5	62.5	45.0	39.7	53.8 <sup>1</sup>
					-		
	Report			е -	1941-48		
	litch to Rogue R			f -	1943-48		
	om Klamath Draine			g - h -	1942-48		
	age space reser				1945-48	40	
	ed on gage zero ( .• 1948	ele wation of	4100.0	i -	Excl. 19	42	
a - Exci	. • 1340						



#### VALLEY PRECIPITATIONa

DRAINAGE DIVISIONS		NT YEAR  - May 1, 1950 D		YEAR - May 1, 1949 D
Southeastern	6.55	-0.63	3.97	-2.60
Southcentral	5.21	-1.95	5.04	-1.91
Central	10.25	+0.42	7.58	<b>-</b> 0•5 <b>7</b>
Columbia River	13.31	+1.11	12.46	+0•49
Wallowa Mountains	11.26	+0.20	8.88	-1.67
Blue Mountains	11.36	-0.59	9.24	<b>-1.</b> 59
Southern	19.35	-0.31	16.82	-2 • 83
Willamette Valley	52.70	+9.12	47.96	+3•04

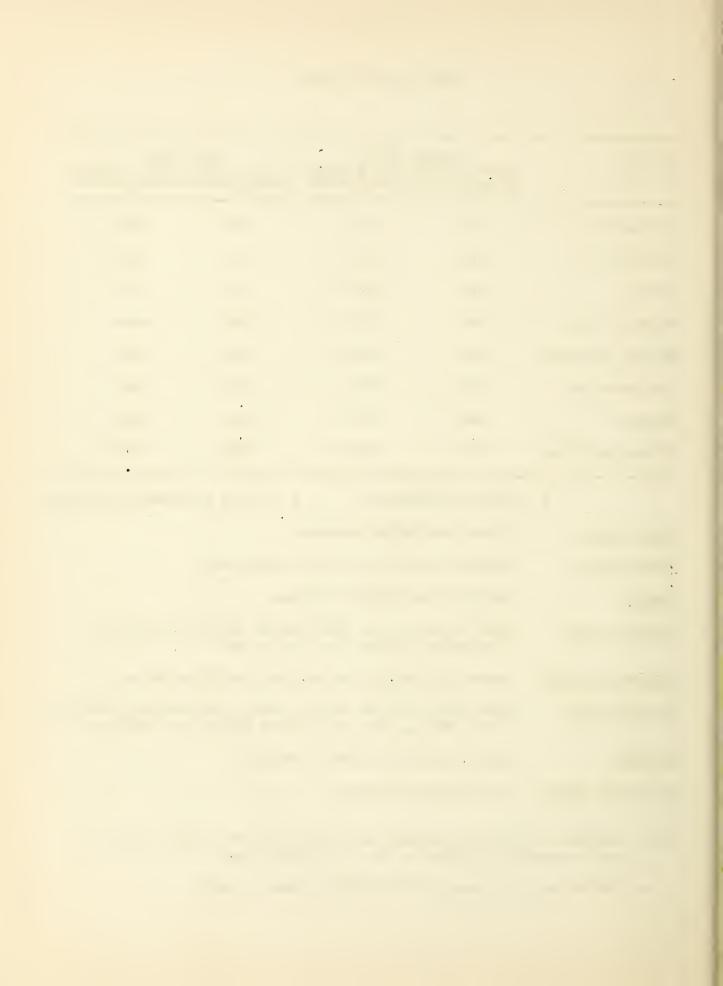
P - Inches Precipitation

D - Inches Departure from normal

Southeastern Malheur and Owyhee drainages Southcentral Interior Basin drainages and Goose Lake Central Deschutes and Crooked drainages Columbia River Lower valleys of the Walla Walla, Umatilla, John Day, Deschutes and Hood River drainages Wallowa Mountains Imnaha, Wallowa, Catherine, Eagle and Pine drainages Blue Mountains Upper valleys of the Burnt, Powder, Grande Ronde, Umatilla Walla Walla, John Day, Silvies and Malheur drainages Southern Umpqua, Rogue and Klamath drainages All Willamette drainages Willamette Valley

Note: Stations used for determining the averages for the current year are not necessarily the same as those used last year.

a - Preliminary data computed from Weather Bureau records.



				Ö	OREGON SN	SNOW SURVEYS, MAY,		1950				
DRATNAGE BASIN	1	LOCATION	NOI					Water Content (In.	OVER ME	SNOW COVER MEASUREMENTS ater Content (In,)	1 1	Past Record
and snow course	Number	Č	E		ا د د د	Date	Snow Depth	0	200	0	Years of	AveWater Content
	o ta te	200°	sec. imp. hang	range Tange	#Iev•	curvey	(Ine)	OCAT	1848	1348	necora	(Tuches)
				UPP	EI RI C	OLUM	BIAI	DRAIN	A G			
				비이	W E	SNAK	EI HI	0 되 되	NI OI			
OWYHEE RIVER												
Silvor City	Idaho	9	SS	3W	6400	5	30.0	12.1	5.5	1	ы	1.8
BURNT RIVER												
Blue Mountain Summit	141	ဖ	128	36E	5098	5-3	3.1	1.4	No	No previous May survey	May su	rvey
IMNAHA RIVER												
Aneroid Lake No. 1 Aneroid Lake No. 2	183 183A	16	4S 4S	45E 45E	7480 7000	4-29	100.9	46 • 8 35 • 0	36.7	1 1	9 ا	30.7 26.1
GRANDE RONDE RIVER												
Aneroid Lake No. 1 Aneroid Lake No. 2 Meacham	183 1834 221 24	16 16 24&25	45 15 15	46 45 35 35 35 35 35	7480 7000 4300	4 4 2 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	100 9 76 0 5 9	46 8 35 0 2 6		1 1 1	9 H и	30.7 26.1 4.9
ortgate	7 T 7	20	44N	_ {	0/00	7-0	D 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	, 1 ;	<u></u>	e violus	Med /	ζον <b>ins</b>
WALLA WALLA RIVER			ыİ	기 이 티	) 이		41 81 81	41 41 41	ല  ധ			
Tollgate	212	32	4N	38E	5070	5-1	62,4	30.1	No	No previous May		survey
UMATILLA RIVER												
Emigrant Springs	222	29	NT.	35E	3925	5-1	0.0	0.0	4		N	2.5



		LOCATION	TION					SNOW COVER MEASUREMENTS	TR MEASU	REMENTS		
DRAINAGE BASIN								Water	Water Content (In.	(In.)	Past	Past Record
and	Number					Date	Snow				Yoars	Av.Water
SNOW COURSE	or					of	Depth				of	Content
,	State	Sec.	Sec. Twp.	Range	Eleve	Survey	(In.)	1950	1949	1948 F	Record	(Inches)
UMATILLA RIVER (Cont'd.)	(*p.											
Moacham		24&25	18	35E	4300	5-1	0 2	9 <b>~</b> 2		,	ત્ય	4.9
Tollgate	212	32	4N	38E	5070	2-1	62.4	30.1	No	No previous	May survey	rey
JOHN DAY RIVER												
Blue Mountain Summit	141	9	128	36E	5098	5-3	3.1	1.4	No	previous	May survey	roy
Dixic Springs	244	<b>%</b> &	118	34E	6650 5293	5-2	57.9	24.7	왕 . I	previous	May survey	rey
Starr Ridge	247B	202	158	31E	5150	2-5	0.0	0.0	. 1	1	N	0
CROOKED RIVER												
Marks Creck	344	25	128	195	4540	4-26	0•0	0.0	No	No previous	May survey	vey
DESCHUTES RIVER												
Cascade Summit	321	2	238	6臣	4880	4-29	86-1	45 • 1	31.7	33.0	4	31.2
Clear Lake	361	29	48	田6	3500	4-30	49.06	23.8	1	1	<b>~</b>	18.4
Hogg Pass	351	24	138	7 <u>5</u> E	4755	4-30	114.5	58•7	65.3	1	83	60.3
New Dutchman Flat	324A	21	188	96	6400	5-4	139.3	61.6	60 • 7	55.4	7	60.3
Three Creeks Meadows	331	3	178	96	2600	5-4	57.5	21.7	16.9	1	Н	16.9
Windigo Pass	744	20	258	田9	2800	5-3	120.6	53.2	20.0	1	~	50.0
Willamette Pass Crescent Lake	323 325	12 11	24 <b>S</b> 24S	5点形 6足	<b>56</b> 00 4760	5-3	119.1	52.3 13.0	46 • 1 No	previous	1 May survey	46 <b>•1</b>
SANDY RIVER												,
Clear Lake	361 -	29	4S 3.5	36	3500	4-30	49.6	23.8	1 68	72.5	-4 -	18.4
Still Croek	451	25	S SS	SH SH	3700	4-27	. 86.4	40.2	89.8	21.5	ន	13.0

OREGON SNOW SURVEYS, MAY, 1950



		100	TOCATION			2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	6 111	S pri 24	TAME THAT	STIME THE PERMITS	TIPS	
MISAG STANIAGE		3	MITTON							775		Pact Room
DRAINAGE BASIN	Mumber	\$				Da + a	Snow		211.00	1	Vears	Av.Water
SACILICA MONOS	S COUNTY	•				) (	Denth				<b>4</b>	Content
PINOTO NONO	State	Sec	Twp.	Range	Elev.	Survey	(In,)	1950	1949	1948	Record	(Inches)
CLACKAMAS RIVER												
Peavine Ridge	169	14&15	89	7E	3500	5 - 3	2 <b>•</b> 99	31.9	28•4	13.0	9	14.5
WILLAMETTE RIVER												
Brei tenbush	551	21	86	7臣	2325	5-1	17.8	7.2	5.7	0.0	83	8.2
Cascade Summit	321	~	238	田9	4880	4-29	86.1	46 • 1	31.7	33.0	4	31.2
Hogg Pass	351	24	138	7 <u>3</u> E	4755	4-30	114.5	58.7	65 • 3	ı	ಬ	60.3
Marion Forks	553	<b>5</b> 8	118	7E	2730	4-30	34.0	18.5	1 (	•	Н (	1.1
Santiam Junction	552	14	138	五 五	3990	4-30	65.3	34.4	21.3	ı	N2	16.4
Willamette Pass	323	21	248	50 E	2600	5-3	119.1	52 • 3	46.1		ч	46.1
					HILL	RIOR	DRAI	N A G				
HARNEY BASIN												
Izee Summit Starr Ridge	964 247B	28	168	29E	<b>5293</b> 5150	2 2 2 2 2 2	1.5	0.0	1 1	1 1	~ ~	1.3
WARNER LAKE												
Camas Creek	911A	Ŋ	398	21E	5720	5-1	E-I	E⊣	No p	No previous	May survey	6y
				BI	(A)	COAST	D R A	I N A G	四			
UMPQUA RIVER												
Diamond Lake Windigo Pass	7 43 7 44	29	27S 25S	6E	5315 5800	4-30	44.6 120.6	18.9 53.2	15.4	21.0	11	15.9

OREGON SNOW SURVEYS, MAY, 1950



		ß	LOCATION	N	PONO NO	COTC	1000 T 1000		SHOW COVER MEASURENES	SUREMEN		
DRAINAGE BASIN								Water	Content	$(In \bullet)$	д	Past Record
and .	Number					Da te	Snow				Years	Av.Water
SNOW COURSE	or State	Sec	Twp	Range	Elev	of Su <b>r</b> vey	Depth (In•)	1950	1949	1948	of Record	Content (Inches)
				)								
ROGUE RIVER												
Annie Spring	831	19	318	至9	6018	4-29	95.4	46.5	43.8	44.3	11	37.9
Billie Creek Divide	722	30	368	5臣	5300	4-29	41.5	21.0	22.3	ŧ	83	26.0
Fish Lake	725	63	378	4E	4865	4-30	14.2	7.6	0.9	•	~	0•9
Hobart Lake	7221	17	40S	3正	5010	4-30	0•0	0.0	No	previous	May	survey
Hyatt Prairie Res.	723	15	398	3臣	4900	4-30	0.0	0.0		8•8	~	8
Park Headquarters	838	ω	318	9	6450	4-29	124.4	0009	59°0	58.4	9	57.6
Scragg Mtn. (Calif.)	7220	0	47N	10M	6200	4-30	57.3	25.9	No	previous	May	survey
Silver Burn	7219	30	308	4瓦	3720	5-2	17 .€	6.5	R	previous	May	survey
South Fork Canal	7218	12	338	3E	3500	5-2	0.0	0•0	No	previous	May	survey
KLAMATH LAKE BASIN												
Annie Spring	831	19	318	9	6018	4-29	95 • 4	46.5	43.8	44.3	11	37.9
Billie Creek Divide	722	30	368	5压	5300	4-29	41.5	21.0	22.3	ı	છ	26.0
Chemult No. 1	834	21	278	8民	4760	5-1	2.8	1.2	0.0	ı	વા	0.1
Hyatt Prairie Res.	723	15	398	3E	4900	4-30	0.0	0.0		8.8	<del></del> 1	8.8
Lake of the Woods	835	Ħ	378	5臣	4960	No report	ort		3.0	7 •0	<u>ئ</u>	5.9
Park Headquarters	828	ω	318	SE	6450	4-29	124.4	0.09	29.0	58.4	9	57 •6
Quartz Mountain	811	~	388	16E	5320	5-4	0.0	0	No	previous	May	survey
GOOSE LAKE BASIN												
Camas Creek	911A	5	398	21E	5720	5-1	E	€	No	previous	May	survey
Quartz Mountain	811	~	388	16E	5320	5-4	0.0	0•0	No	previous	May	Survey
				DELAY	ED DATA	DELAYED DATA NOT PREVIOUSLY PUBLISHED	COUSLY PU	BLISHED				
HOOD RIVER						1						
Greenpoint Reservoir	433	28	ZN	96	3400	4-13	61.9	31.7	No	compara	No comparative data	æ



#### STATE

Idaho Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon State Engineer and corps of State Watermasters
Oregon State Highway Engineers

#### FEDERAL

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Commerce
Weather Bureau
Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
Indian Service
National Park Service
War Department
Army Engineer Corps

#### PUBLIC UTILITIES

California-Pacific Utilities Company Portland General Electric Company The California Oregon Power Company

#### MUNICIPALITIES

City of Baker City of Corvallis City of LaGrande City of The Dalles

#### IPRIGATION DISTRICTS

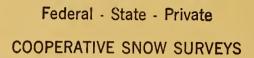
Associated Ditch Companies
Central Oregon Irrigation District
Deschutes County Municipal Improvement District
East Fork Irrigation District
Grants Pass Irrigation District
Jordan Valley Irrigation District
Lakeview Water Users Incorporated
Medford Irrigation District
Ochoco Irrigation District
Rogue River Irrigation District
Talent Irrigation District
Vale-Oregon Irrigation District
Warmsprings Irrigation District

#### PRIVATE ORGANIZATIONS

Amalgamated Sugar Company South Wasco Soil Conservation District The Crag Rats-Hood River-Oregon







Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"WATER IS THE WEST'S GREATEST RESOURCE"